



WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
**PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE
ELIMINATION SYSTEM**

WEYAUWEGA STAR DAIRY

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility
located at

113 W Wisconsin Street, Weyauwega
to

Weyauwega Lake via stormsewer and the groundwater of the Walla Walla and Alder Creek (WR03), Lower Wolf
River (WR04) and the Waupaca River (WR05) Watersheds, Wolf River Basin, via landspreading in Waupaca County

in accordance with the effluent limitations, monitoring requirements and other conditions set
forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after
this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis.
Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Heidi Schmitt Marquez
Wastewater Field Supervisor

Date Permit Signed/Issued for Modification

PERMIT TERM: EFFECTIVE DATE - January 01, 2017
EFFECTIVE DATE OF MODIFICATION: October 01, 2020

EXPIRATION DATE - December 31, 2021

TABLE OF CONTENTS

1 SURFACE WATER REQUIREMENTS	1
1.1 SAMPLING POINT(S)	1
1.2 MONITORING REQUIREMENTS AND EFFLUENT LIMITATIONS	1
1.2.1 <i>Sampling Point (Outfall) 001 - NCCW TO WEYAUWEGA LAKE</i>	1
2 LAND APPLICATION REQUIREMENTS	2
2.1 SAMPLING POINT(S)	2
2.2 MONITORING REQUIREMENTS AND LIMITATIONS	2
2.2.1 <i>Sampling Point (Outfall) 002 - PROCESS WW TO LANDSPREADING</i>	2
2.2.2 <i>Sampling Point (Outfall) 004 - STORAGE UNIT WW TO LANDSPREAD</i>	4
3 SCHEDULES	6
3.1 LAND APPLICATION MANAGEMENT PLAN	6
4 STANDARD REQUIREMENTS	7
4.1 REPORTING AND MONITORING REQUIREMENTS	7
4.1.1 <i>Monitoring Results</i>	7
4.1.2 <i>Sampling and Testing Procedures</i>	7
4.1.3 <i>Recording of Results</i>	7
4.1.4 <i>Reporting of Monitoring Results</i>	7
4.1.5 <i>Records Retention</i>	8
4.1.6 <i>Other Information</i>	8
4.2 SYSTEM OPERATING REQUIREMENTS	8
4.2.1 <i>Noncompliance Reporting</i>	8
4.2.2 <i>Bypass</i>	9
4.2.3 <i>Scheduled Bypass</i>	9
4.2.4 <i>Controlled Diversions</i>	9
4.2.5 <i>Proper Operation and Maintenance</i>	10
4.2.6 <i>Spill Reporting</i>	10
4.2.7 <i>Planned Changes</i>	10
4.2.8 <i>Duty to Halt or Reduce Activity</i>	10
4.3 SURFACE WATER REQUIREMENTS	10
4.3.1 <i>Permittee-Determined Limit of Quantitation Incorporated into this Permit</i>	10
4.3.2 <i>Appropriate Formulas for Effluent Calculations</i>	10
4.3.3 <i>Effluent Temperature Requirements</i>	11
4.3.4 <i>Visible Foam or Floating Solids</i>	11
4.3.5 <i>Surface Water Uses and Criteria</i>	11
4.3.6 <i>Additives</i>	12
4.4 LAND APPLICATION REQUIREMENTS	12
4.4.1 <i>Land Application Characteristic Report</i>	12
4.4.2 <i>Monitoring and Calculating PCB Concentrations in Sludge</i>	12
4.4.3 <i>Annual Land Application Report</i>	13
4.4.4 <i>Other Methods of Disposal or Distribution Report</i>	13
4.4.5 <i>Land Application Site Approval</i>	13
4.4.6 <i>Operating Requirements/Management Plan</i>	13
4.4.7 <i>Chloride Requirements for Liquid Wastes and By-Product Solids</i>	14
4.4.8 <i>Nitrogen Requirements for Liquid Wastes and By-Product Solids and Sludges</i>	14
4.4.9 <i>Ponding</i>	14
4.4.10 <i>Runoff</i>	14
4.4.11 <i>Soil Incorporation Requirements</i>	14
4.4.12 <i>Additional Requirements from ch. NR 214, Wis. Adm. Code</i>	15
5 SUMMARY OF REPORTS DUE	16

1 Surface Water Requirements

1.1 Sampling Point(s)

The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)
001	Representative samples of noncontact cooling water sampled prior to discharge to Weyauwega Lake via storm sewer

1.2 Monitoring Requirements and Effluent Limitations

The permittee shall comply with the following monitoring requirements and limitations.

1.2.1 Sampling Point (Outfall) 001 - NCCW TO WEYAUWEGA LAKE

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Quarterly	Total Daily	

2 Land Application Requirements

2.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites or by hauling to another facility.

Sampling Point Designation	
Sampling Point Number	Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)
002	Representative samples of process wastewater (salt pressings, brine, washwater, boiler condensate & whey permeate) sampled prior to landspreading.
004	The 1.3 million gallon storage unit located at E7156 Garrity Rd, Manawa, WI is to be used for the storage of only liquid industrial wastewater generated by Weyauwega Star Dairy. Representative samples of wastewater from the storage unit shall be sampled prior to landspreading.

2.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

2.2.1 Sampling Point (Outfall) 002 - PROCESS WW TO LANDSPREADING

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Monthly	Total Daily	
Nitrogen, Total Kjeldahl		mg/L	Quarterly	Grab	
Chloride		mg/L	Quarterly	Grab	
BOD ₅ , Total		mg/L	Annual	Grab	

Daily Log – Monitoring Requirements and Limitations				
All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under “Records Retention” in the Standard Requirements section, and if requested, made available to the Department.				
Parameters	Limit	Units	Sample Frequency	Sample Type
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Frozen Site Maximum Daily Loading Volume	6,800	Gal/Acre/Day	Daily	Calculated
Unfrozen Site Maximum Daily Loading Volume	13,500	Gal/Acre/Day	Daily	Calculated
Weekly Loading Volume	See NR 214 - Tbl 3	Inches/Week	Weekly	Calculated

Annual Report – Summary of Monitoring Requirements and Limitations The Annual Report is due by January 31 st of each year for the previous calendar year. See the ‘Annual Land Application Report’ subsection in Standard Requirements.				
Parameters	Limit	Units	Reporting Frequency	Sample Type
DNR Site Number(s)	-	Number	-	-
Acres Land Applied	-	Acres	Annual	-
Total Volume Per Site	-	Gallons	Annual	Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years	Annual	Calculated

2.2.1.1 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the “Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges” paragraph in the Standard Requirements section of this permit.

2.2.1.2 Biennial Site Chloride Loading

For details on chloride requirements see the “Chloride Requirements for Liquid Wastes and By-Product Solids” paragraph in the Standard Requirements section of this permit.

2.2.1.3 Monthly Average Discharge Volume

The monthly average of the daily discharge volume shall be reported on the Characteristics Report Form 3400-49. Calculate the monthly average discharge volume by dividing the total amount discharged for the month by the total number of days in the month.

2.2.2 Sampling Point (Outfall) 004 - STORAGE UNIT WW TO LANDSPREAD

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Nitrogen, Total Kjeldahl		mg/L	Quarterly	Grab	Sampling only required when landspreading occurs.
Nitrogen, Organic Total		mg/L	Quarterly	Grab	Sampling only required when landspreading occurs.
Phosphorus, Total		mg/L	Quarterly	Grab	Sampling only required when landspreading occurs.
Phosphorus, Water Extractable		% of Tot P	Quarterly	Grab	Sampling only required when landspreading occurs.
Chloride		mg/L	Quarterly	Grab	Sampling only required when landspreading occurs.
Potassium, Total Recoverable		mg/L	Quarterly	Grab	Sampling only required when landspreading occurs.

Daily Log – Monitoring Requirements and Limitations				
All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under “Records Retention” in the Standard Requirements section, and if requested, made available to the Department.				
Parameters	Limit	Units	Sample Frequency	Sample Type
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Frozen Site Maximum Daily Loading Volume	6,800	Gal/Acre/Day	Daily	Calculated
Unfrozen Site Maximum Daily Loading Volume	13,500	Gal/Acre/Day	Daily	Calculated
Weekly Loading Volume	See NR 214 - Tbl 3	Inches/Week	Weekly	Calculated

Annual Report – Summary of Monitoring Requirements and Limitations				
The Annual Report is due by January 31 st of each year for the previous calendar year. See the ‘Annual Land Application Report’ subsection in Standard Requirements.				
Parameters	Limit	Units	Reporting Frequency	Sample Type
DNR Site Number(s)	-	Number	-	-
Acres Land Applied	-	Acres	Annual	-
Total Volume Per Site	-	Gallons	Annual	Total Annual

Annual Report – Summary of Monitoring Requirements and Limitations The Annual Report is due by January 31 st of each year for the previous calendar year. See the ‘Annual Land Application Report’ subsection in Standard Requirements.				
Parameters	Limit	Units	Reporting Frequency	Sample Type
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years	Annual	Calculated

2.2.2.1 Annual Site Nitrogen Loading

For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the “Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges” paragraph in the Standard Requirements section of this permit.

2.2.2.2 Biennial Site Chloride Loading

For details on chloride requirements see the “Chloride Requirements for Liquid Wastes and By-Product Solids” paragraph in the Standard Requirements section of this permit.

2.2.2.3 Annual Inspection

This storage structure shall be emptied and visually inspected on an annual basis pursuant to s. NR 108.04(5), Wis. Adm. Code. The inspection process should be noted in the land management plan, but at a minimum the inspector shall identify any cracks or deficiencies in the structure.

3 Schedules

3.1 Land Application Management Plan

A management plan is required for the land application system.

Required Action	Due Date
Land Application Management Plan: Submit an update to the management plan to optimize the land application system performance and demonstrate compliance with Wisconsin Administrative Code NR 214.	11/30/2020

4 Standard Requirements

NR 205, Wisconsin Administrative Code (Conditions for Industrial Dischargers): The conditions in ss. NR 205.07(1) and NR 205.07(3), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(3).

4.1 Reporting and Monitoring Requirements

4.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report may require reporting of any or all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

Monitoring results shall be reported on an electronic discharge monitoring report (eDMR). The eDMR shall be certified electronically by a principal executive officer, a ranking elected official or other duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

4.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

4.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;
- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

4.1.4 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.
- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.
- For purposes of calculating NR 101 fees, the 2 mg/l lower reporting limits for BOD₅ and Total Suspended Solids shall be considered to be limits of quantitation
- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

4.1.5 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 3 years from the date of the sample, measurement, report or application, except for sludge management forms and records, which shall be kept for a period of at least 5 years.

4.1.6 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

4.2 System Operating Requirements

4.2.1 Noncompliance Reporting

The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance:

- any noncompliance which may endanger health or the environment;
- any violation of an effluent limitation resulting from a bypass;
- any violation of an effluent limitation resulting from an upset; and
- any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit, either for effluent or sludge.

A written report describing the noncompliance shall also be submitted to the Department as directed at the end of this permit within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

A scheduled bypass approved by the Department under the 'Scheduled Bypass' section of this permit shall not be subject to the reporting required under this section.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. **The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at 1-800-943-0003.**

4.2.2 Bypass

Except for a controlled diversion as provided in the 'Controlled Diversions' section of this permit, any bypass is prohibited and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats. The Department may approve a bypass if the permittee demonstrates all the following conditions apply:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities or adequate back-up equipment, retention of untreated wastes, reduction of inflow and infiltration, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance. When evaluating feasibility of alternatives, the department may consider factors such as technical achievability, costs and affordability of implementation and risks to public health, the environment and, where the permittee is a municipality, the welfare of the community served; and
- The bypass was reported in accordance with the 'Noncompliance Reporting' section of this permit.

4.2.3 Scheduled Bypass

Whenever the permittee anticipates the need to bypass for purposes of efficient operations and maintenance and the permittee may not meet the conditions for controlled diversions in the 'Controlled Diversions' section of this permit, the permittee shall obtain prior written approval from the Department for the scheduled bypass. A permittee's written request for Department approval of a scheduled bypass shall demonstrate that the conditions for unscheduled bypassing are met and include the proposed date and reason for the bypass, estimated volume and duration of the bypass, alternatives to bypassing and measures to mitigate environmental harm caused by the bypass. The department may require the permittee to provide public notification for a scheduled bypass if it is determined there is significant public interest in the proposed action and may recommend mitigation measures to minimize the impact of such bypass.

4.2.4 Controlled Diversions

Controlled diversions are allowed only when necessary for essential maintenance to assure efficient operation provided the following requirements are met:

- Effluent from the wastewater treatment facility shall meet the effluent limitations established in the permit. Wastewater that is diverted around a treatment unit or treatment process during a controlled diversion shall be recombined with wastewater that is not diverted prior to the effluent sampling location and prior to effluent discharge;
- A controlled diversion may not occur during periods of excessive flow or other abnormal wastewater characteristics;
- A controlled diversion may not result in a wastewater treatment facility overflow; and
- All instances of controlled diversions shall be documented in wastewater treatment facility records and such records shall be available to the department on request.

4.2.5 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. The wastewater treatment facility shall be under the direct supervision of a state certified operator as required in s. NR 108.06(2), Wis. Adm. Code. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4.2.6 Spill Reporting

The permittee shall notify the Department in accordance with ch. NR 706 (formerly NR 158), Wis. Adm. Code, in the event that a spill or accidental release of any material or substance results in the discharge of pollutants to the waters of the state at a rate or concentration greater than the effluent limitations established in this permit, or the spill or accidental release of the material is unregulated in this permit, unless the spill or release of pollutants has been reported to the Department in accordance with s. NR 205.07 (1)(s), Wis. Adm. Code.

4.2.7 Planned Changes

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

4.2.8 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

4.3 Surface Water Requirements

4.3.1 Permittee-Determined Limit of Quantitation Incorporated into this Permit

For pollutants with water quality-based effluent limits below the Limit of Quantitation (LOQ) in this permit, the LOQ calculated by the permittee and reported on the Discharge Monitoring Reports (DMRs) is incorporated by reference into this permit. The LOQ shall be reported on the DMRs, shall be the lowest quantifiable level practicable, and shall be no greater than the minimum level (ML) specified in or approved under 40 CFR Part 136 for the pollutant at the time this permit was issued, unless this permit specifies a higher LOQ.

4.3.2 Appropriate Formulas for Effluent Calculations

The permittee shall use the following formulas for calculating effluent results to determine compliance with average concentration limits and mass limits and total load limits:

Weekly/Monthly/Six-Month/Annual Average Concentration = the sum of all daily results for that week/month/six-month/year, divided by the number of results during that time period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Weekly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the week.

Monthly Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the month.

Six-Month Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the six-month period. [Note: When a six-month average effluent limit is specified for Total Phosphorus the applicable periods are May through October and November through April.]

Annual Average Mass Discharge (lbs/day): Daily mass = daily concentration (mg/L) x daily flow (MGD) x 8.34, then average the daily mass values for the entire year.

Total Monthly Discharge: = monthly average concentration (mg/L) x total flow for the month (MG/month) x 8.34.

Total Annual Discharge: = sum of total monthly discharges for the calendar year.

12-Month Rolling Sum of Total Monthly Discharge: = the sum of the most recent 12 consecutive months of Total Monthly Discharges.

4.3.3 Effluent Temperature Requirements

Weekly Average Temperature – The permittee shall use the following formula for calculating effluent results to determine compliance with the weekly average temperature limit (as applicable): Weekly Average Temperature = the sum of all daily maximum results for that week divided by the number of daily maximum results during that time period.

Cold Shock Standard – Water temperatures of the discharge shall be controlled in a manner as to protect fish and aquatic life uses from the deleterious effects of cold shock. ‘Cold Shock’ means exposure of aquatic organisms to a rapid decrease in temperature and a sustained exposure to low temperature that induces abnormal behavior or physiological performance and may lead to death.

Rate of Temperature Change Standard – Temperature of a water of the state or discharge to a water of the state may not be artificially raised or lowered at such a rate that it causes detrimental health or reproductive effects to fish or aquatic life of the water of the state.

4.3.4 Visible Foam or Floating Solids

There shall be no discharge of floating solids or visible foam in other than trace amounts.

4.3.5 Surface Water Uses and Criteria

In accordance with NR 102.04, Wis. Adm. Code, surface water uses and criteria are established to govern water management decisions. Practices attributable to municipal, industrial, commercial, domestic, agricultural, land development or other activities shall be controlled so that all surface waters including the mixing zone meet the following conditions at all times and under all flow and water level conditions:

- a) Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.
- b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.
- c) Materials producing color, odor, taste or unsightliness shall not be present in such amounts as to interfere with public rights in waters of the state.

- d) Substances in concentrations or in combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

4.3.6 Additives

In the event that the permittee wishes to commence use of a water treatment additive, or increase the usage of the additives greater than indicated in the permit application, the permittee must get a written approval from the Department prior to initiating such changes. This written approval shall provide authority to utilize the additives at the specific rates until the permit can be either reissued or modified in accordance with s. 283.53, Stats. Restrictions on the use of the additives may be included in the authorization letter.

4.4 Land Application Requirements

4.4.1 Land Application Characteristic Report

The analytical results from testing of liquid wastes, by-product solids and sludges that are land applied shall be reported annually on the Characteristic Report Form 3400-49. The report form shall be submitted electronically no later than the date indicated on the form. Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the 'eReport Certify' page by a principal executive officer or duly authorized representative. The 'eReport Certify' page certifies that the electronic report form is true, accurate and complete.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .

All sludge results shall be reported on a dry weight basis.

4.4.2 Monitoring and Calculating PCB Concentrations in Sludge

When sludge analysis for "PCB, Total Dry Wt" is required by this permit, the PCB concentration in the sludge shall be determined as follows.

Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with the following provisions and Table EM in s. NR 219.04, Wis. Adm. Code.

- EPA Method 1668 may be used to test for all PCB congeners. If this method is employed, all PCB congeners shall be delineated. Non-detects shall be treated as zero. The values that are between the limit of detection and the limit of quantitation shall be used when calculating the total value of all congeners. All results shall be added together and the total PCB concentration by dry weight reported. **Note:** It is recognized that a number of the congeners will co-elute with others, so there will not be 209 results to sum.
- EPA Method 8082A shall be used for PCB-Aroclor analysis and may be used for congener specific analysis as well. If congener specific analysis is performed using Method 8082A, the list of congeners tested shall include at least congener numbers 5, 18, 31, 44, 52, 66, 87, 101, 110, 138, 141, 151, 153, 170, 180, 183, 187, and 206 plus any other additional congeners which might be reasonably expected to occur in the particular sample. For either type of analysis, the sample shall be extracted using the Soxhlet extraction (EPA Method 3540C) (or the Soxhlet Dean-Stark modification) or the pressurized fluid extraction (EPA Method 3545A). If Aroclor analysis is performed using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.11 mg/kg as possible. Reporting protocol, consistent with s. NR 106.07(6)(e), should be as

follows: If all Aroclors are less than the LOD, then the Total PCB Dry Wt result should be reported as less than the highest LOD. If a single Aroclor is detected then that is what should be reported for the Total PCB result. If multiple Aroclors are detected, they should be summed and reported as Total PCBs. If congener specific analysis is done using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.003 mg/kg as possible for each congener. If the aforementioned limits of detection cannot be achieved after using the appropriate clean up techniques, a reporting limit that is achievable for the Aroclors or each congener for the sample shall be determined. This reporting limit shall be reported and qualified indicating the presence of an interference. The lab conducting the analysis shall perform as many of the following methods as necessary to remove interference:

3620C – Florisil	3611B - Alumina
3640A - Gel Permeation	3660B - Sulfur Clean Up (using copper shot instead of powder)
3630C - Silica Gel	3665A - Sulfuric Acid Clean Up

4.4.3 Annual Land Application Report

The annual totals for the land application loadings of liquid wastes, by-product solids and sludges to field spreading sites shall be submitted electronically on the Annual Land Application Report Form 3400-55 by January 31, each year whether or not waste is land applied. Following submittal of the electronic Annual Land Application Report Form 3400-55, this form shall be certified electronically via the ‘eReport Certify’ page by a principal executive officer or duly authorized representative. The ‘eReport Certify’ page certifies that the electronic report form is true, accurate and complete.

4.4.4 Other Methods of Disposal or Distribution Report

The permittee shall submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31, each year whether or not waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit. Following submittal of the electronic Report Form 3400-52, this form shall be certified electronically via the ‘eReport Certify’ page by a principal executive officer or duly authorized representative. The ‘eReport Certify’ page certifies that the electronic report form is true, accurate and complete.

4.4.5 Land Application Site Approval

The permittee is authorized to landspread permitted liquid wastes, by-product solids and sludges on sites approved in writing by the Department in accordance with ss. NR 214.17(2) and 214.18(2), Wis. Adm. Code. Any site use restrictions or granting of case-by-case exceptions shall be identified in the approval letter. If the permittee wishes to have approval for additional sites, application shall be made using Land Application Site Request Form 3400-053. Complete information shall be submitted about each site, including location maps and soil maps, any soil analyses results and other information showing that the site complies with all application requirements and permit conditions. Spreading on a site may commence upon receipt of Department approval. If an existing spreading site is found by the Department to be environmentally unacceptable, a written notice will be issued to withdraw approval of that site.

4.4.6 Operating Requirements/Management Plan

All land application sites used for treatment of liquid wastes, by-product solids and sludges shall be operated in accordance with a Department approved management plan. The management plan shall be consistent with the requirements of this permit, ss. NR 214.17 (3) and (6), and NR 214.18 (3) and (6), Wis. Adm. Code. If operational changes are needed, the land application management plan shall be amended by submitting a written request to the Department for approval. A land application management plan shall be submitted for approval at least 60 days prior to land application.

4.4.7 Chloride Requirements for Liquid Wastes and By-Product Solids

The total pounds of chloride applied shall be limited to 340 pounds per acre per 2 year period. Calculate the chloride loading as follows:

$$\text{Wet Weight Solids: } \frac{\text{lbs of solids} \times \% \text{solids} \times \% \text{chloride}}{\text{acres land applied} \times 100 \times 100} = \text{lbs chloride/acre}$$

$$\text{Liquid: } \frac{\text{mg/L chloride} \times (\text{millions of gallons}) \times 8.34}{\text{acres land applied}} = \text{lbs chloride/acre}$$

4.4.8 Nitrogen Requirements for Liquid Wastes and By-Product Solids and Sludges

NR 214.17(4) and NR 214.18(4) Wis. Adm. Code specify that the total pounds of nitrogen land applied per acre per year shall be limited to the nitrogen needs of the cover crop minus any other nitrogen added to the land application site, including fertilizer or manure. Nitrogen applied can be calculated on the basis of plant available nitrogen, as long as the release of nitrogen from the organic material is credited to future years. This permit requires that the Total Kjeldahl Nitrogen calendar year application amount shall not exceed 165 pounds per acre per year, except when alternate numerical nitrogen loading limits (consistent with the above sections of NR 214) are approved in writing via the Department's land application management plan approval. Calculate nitrogen loading as follows ("TKN" represents "Total Kjeldahl Nitrogen"):

$$\text{Wet Weight Solids and Sludges: } \frac{\text{lbs of solids} \times \% \text{solids} \times \% \text{TKN}}{\text{acres land applied} \times 100 \times 100} = \text{lbs TKN/acre}$$

$$\text{Liquid: } \frac{\text{mg/L TKN} \times (\text{millions of gallons}) \times 8.34}{\text{acres land applied}} = \text{lbs TKN/acre}$$

4.4.9 Ponding

The volume of liquid wastes land applied shall be limited to prevent ponding, except for temporary conditions following rainfall events. If ponding occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

4.4.10 Runoff

The volume of liquid wastes land applied shall be limited to prevent runoff. If runoff occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

4.4.11 Soil Incorporation Requirements

- Liquid Sludge Requirements: The Department may require that liquid sludge be incorporated into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for incorporation of liquid sludge, when such incorporation may be necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- Cake Sludge Requirements: After land application, cake sludge shall be incorporated into the soil. The timing of such incorporation and other related requirements and procedures shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall

comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

- **Liquid Wastewater Requirements:** The Department may require that liquid wastewater be incorporated or injected into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for injection or incorporation of liquid wastewater, when such injection or incorporation is necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- **By-Product Solids Requirements:** The Department may limit the volume of by-products solids that are landspread on a specific site when necessary to prevent surface runoff or leaching of contaminants to groundwater and objectionable odors. By-product solids shall, after application, be plowed, disced, or otherwise incorporated into the soil. Requirements and procedures for the incorporation of byproduct solids into the soil shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

4.4.12 Additional Requirements from ch. NR 214, Wis. Adm. Code

The requirements of s. NR 214.17 (4)(c) [pathogen prohibition for human consumption crop fields], (4)(d)1 [no adverse soil effects], (4)(d)10 [allowable whey spreading rates], and (4)(e)1-3 [by-product solids spreading within agricultural practices and not cause contamination] for landspreading of liquid wastes and by product solids and s. NR 214.18 (4)(b),(d)-(h) [application, nutrient, pH, metals, and PCB limitations] for sludge spreading systems are included by reference in this permit. The permittee shall comply with these requirements.

5 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Land Application Management Plan -Land Application Management Plan	November 30, 2020	6
Characteristic Report Form 3400-49	no later than the date indicated on the form	12
Land Application Report Form 3400-55	January 31, each year whether or not waste is land applied	13
Report Form 3400-52	by January 31, each year whether or not waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit	13
Wastewater Discharge Monitoring Report	no later than the date indicated on the form	7

Report forms shall be submitted electronically in accordance with the reporting requirements herein. Any facility plans or plans and specifications for municipal, industrial, industrial pretreatment and non industrial wastewater systems shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:

Northeast Region, 2984 Shawano Avenue, Green Bay, WI 54313-6727